Removal of Radio Frequency Interference in Wideband Radars

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Abstract: We apply the least-mean-square (LMS) adaptive filter to remove radio frequency interference (RFI) in wideband synthetic aperture radar (SAR) signals. A SAR simulator is used to show the working principles of the adaptive filter and to select the optimal filter's parameters. The proposed algorithm is tested with real data collected in the JPL TopSAR program.